

Preparation of Fine Particulate Emission Inventories

Final Exam

1. _____ are composed mostly of carbonaceous particles, but will also contain crustal materials and a few other materials.
 - a. Primary particles
 - b. Secondary particles
 - c. VOCs
 - d. Sulfates
2. Twenty-five percent of total _____ emissions are associated with electric utilities, the second largest contributor.
 - a. VOC
 - b. SO_x
 - c. NO_x
 - d. PM
3. _____ are currently under development for estimating emissions from ammonia sources, fugitive dust and wildland fires.
 - a. Emission processors
 - b. Process-based emission models
 - c. Receptor Models
 - d. FIRE databases
4. The _____ includes data on 52,000-point sources and about 400 categories of highway and nonroad mobile sources and 300 categories of area sources.
 - a. National Acidic Precipitation Assessment Program
 - b. National Particle Inventory
 - c. National Emissions Trends Inventory
 - d. National Emissions Inventory
5. In calculating emissions from onroad sources, _____ data needs to be matched to a corresponding MOBILE 6.2 emission factor and mapped according to speed, roadway, and vehicle type.
 - a. VMT
 - b. FHA
 - c. LTO
 - d. RMS

6. Which of the following pollutants do **not** have an emission factor included in the NONROAD model?
 - a. CO
 - b. CO₂
 - c. VOC
 - d. None of the above
7. Which of the following is a measure of equipment activity that is used by the NONROAD model to estimate exhaust emissions?
 - a. Load factor
 - b. Horsepower
 - c. Equipment population
 - d. All of the above
8. Which of the following statements about primary PM is true?
 - a. It is emitted directly from a stack.
 - b. It is formed downwind of the source.
 - c. It consists of filterable PM only.
 - d. It is almost always PM_{2.5} or less.
9. Secondary PM precursors should _____.
 - a. not be reported in a particulate matter emission inventory.
 - b. always be reported in a particulate matter emission inventory.
 - c. be reported in a particulate matter emission inventory for nonattainment areas.
 - d. be totaled with primary PM in a particulate matter emission inventory.
10. Which of the following is **not** a source for obtaining information for identifying area sources for inclusion in an emissions inventory?
 - a. EIIP Area Source Guidance
 - b. AP-42
 - c. SCC Handbook
 - d. Toxics Release Inventory
11. Which type of emissions are reported for PM in the NEI?
 - a. Actual
 - b. Allowable
 - c. Potential
 - d. All of the above
12. Which of the following variables is **not** included in the NEI emissions methodology for estimating emissions from agricultural tilling operations?
 - a. silt content of soil
 - b. acres of land tilled
 - c. control measures
 - d. number of passes

13. In the unpaved roads category, the NEI contains emission estimates for _____.
- a. PM₁₀
 - b. PM_{2.5}
 - c. Condensable PM
 - d. A and B
14. True or False - A smaller Precipitation Evaporation value represents low precipitation and humidity and results in larger adjustment to the base emissions estimate for fugitive emissions from construction activities.
- a. True
 - b. False
15. Which of the following statements about ammonia emissions from animal husbandry operations is **false**?
- a. Animal husbandry operations are the largest emitter of ammonia nationally.
 - b. There are probable errors in some of the ammonia emission factors in the NEI.
 - c. The NEI does not take temperature into account in estimating ammonia emissions.
 - d. All of these statements are false.
16. For which of the following categories did the NEI **not** develop a methodology?
- a. agricultural field burning
 - b. agricultural tilling
 - c. wood stoves
 - d. land clearing debris burning
17. The NEI methodology for residential municipal solid waste burning assumes that if a county has an urban population that exceeds 80% of the total population, the amount of waste burned is _____ percent.
- a. 0
 - b. 25
 - c. 50
 - d. 75
18. The activity data for land clearing debris burning is the same that is used for the _____ category.
- a. agricultural burning
 - b. unpaved roads
 - c. agricultural tilling
 - d. construction

19. How many manure management trains have been identified for estimating ammonia emissions from animal husbandry operations?
- a. one
 - b. one for each type of animal
 - c. six
 - d. fifteen
20. Developing VMT data for use in conjunction with MOBILE 6.2 can be done by using _____ distributions of VMT.
- a. roadway type
 - b. time-weighted
 - c. speed
 - d. population-weighted

Name: _____

**PREPARATION OF FINE PARTICULATE EMISSION INVENTORIES
FINAL EXAM ANSWER SHEET**

Instructions: Circle the appropriate answer on this Answer Sheet

- | | | | | |
|-----|---|---|---|---|
| 1. | A | B | C | D |
| 2. | A | B | C | D |
| 3. | A | B | C | D |
| 4. | A | B | C | D |
| 5. | A | B | C | D |
| 6. | A | B | C | D |
| 7. | A | B | C | D |
| 8. | A | B | C | D |
| 9. | A | B | C | D |
| 10. | A | B | C | D |
| 11. | A | B | C | D |
| 12. | A | B | C | D |
| 13. | A | B | C | D |
| 14. | A | B | C | D |
| 15. | A | B | C | D |
| 16. | A | B | C | D |
| 17. | A | B | C | D |
| 18. | A | B | C | D |
| 19. | A | B | C | D |
| 20. | A | B | C | D |

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Final Exam- Instructor's Version

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FINAL EXAM ANSWER SHEET – INSTRUCTOR VERSION**

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2. A B ☒ C D
3. A ☒ B C D
4. A B C ☒ D
5. ☒ A B C D
6. A B C ☒ D
7. A B C ☒ D
8. ☒ A B C D
9. ☒ A B C D
10. A B ☒ C D
11. ☒ A B C D
12. A B ☒ C D
13. A B C ☒ D
14. ☒ A B C D
15. A B C ☒ D
16. ☒ A B C D
17. ☒ A B C D
18. A B C ☒ D
19. A B C ☒ D
20. ☒ A B C D